VALIDATE

U.S. Army
Enterprise Solutions Competency Center

EDUCATE

CONSULT

www.army.mil/escc

US ARMY PEO EIS
PEO Enterprise Information Systems

Enterprise Business Lab

The Enterprise Business Lab (EBL) is an operational lab whose mission is to test enterprise solutions within the Army's Business Mission Area. The EBL provides a proving ground for emerging and advanced technology. The ultimate end-state is to have an operating SOA that demonstrates effectively using "real" Army legacy data. Currently the EBL is supporting the AAIC, AMC and AcqBiz.

Current EBL initiatives …

- **Enterprise-level software integration** (ex. Enterprise Service Bus vendor integration)
- **Scalable technology to reduce IT costs** (ex. server virtualization)
- **Presentation layer support** (ex. SharePoint 2007)
- **Identity Management** using single sign-on (SSO) and federated authentication management

EBL Forward Vision

- Give vendors opportunity to demonstrate “real-world” advantages of SOA architecture, hardware, and ESBs
- Demonstrate interoperability and federated architectures
- Publish and demonstrate experience and lessons learned via SOA.ARMY.MIL

Enterprise Service Bus

- Enterprise Service Bus (ESB) - Major component enabling net-centric applications to communicate effectively and consume Web services in a robust and scalable fashion.
- ESB vendors invited to provide a working prototype in the EBL and address Army-specific use cases to demonstrate capabilities.
- **Benefits of the ESB to Army:**
  - Distribute information easily and rapidly
  - Hide differences in platform, software architecture and network protocols
  - Assure delivery of information, even when systems and networks go off-line
  - Reroute, log and enrich information, under central control, without rewriting applications
  - Deploy solutions incrementally, project by project, to better manage expense
  - Minimize risk by using industry standard interfaces and protocols

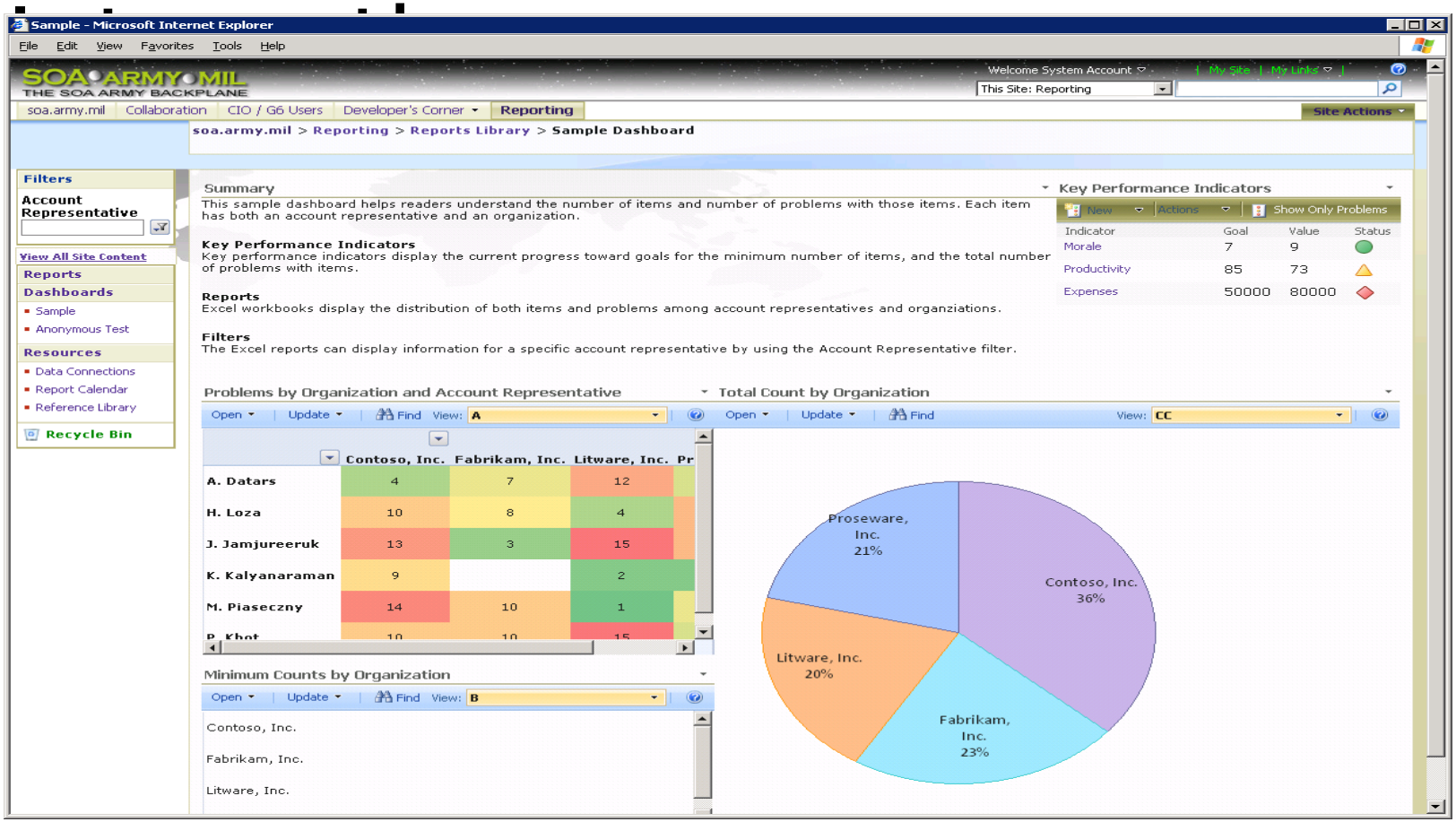
Server Virtualization

- Utilize server virtualization to reduce IT costs.
- Multi-CPU systems under utilized
- Dual CPU Intel quad-core can run 6 virtual machines (VM)
- 10 Blades turn into 60 VMs
  - All Power Controlled
  - Capacity On Demand
  - Energy savings
  - Physical space savings
  - Physical to Virtual (P2V) and Virtual to Physical (V2P) Rollover

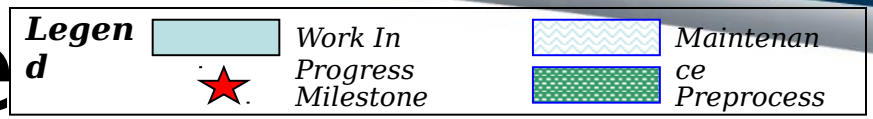
Presentation Layer & ID Management

- Presentation Layer
  - Graphical display of information that is easily tailored to user, role, or mission
  - Provides access to integrated and actionable information
  - Provides consistent look for feel for ease of use (branding)
- Identity Management
  - Authentication, Authorization, and Access Control
  - Enables single sign-on to content, systems, and services
  - Crucial for net-centric military

SharePoint Dashboard


Sample - Microsoft Internet Explorer
File Edit View Favorites Tools Help
SOA ARMY MIL
THE SOA ARMY BACKPLANE
Welcome System Account
This Site: Reporting
soa.army.mil Collaboration CIO / G6 Users Developer's Corner Reporting
Site Actions
soa.army.mil > Reporting > Reports Library > Sample Dashboard
Filters
Account Representative
View All Site Content
Reports
Dashboards
Sample
Anonymous Test
Resources
Data Connections
Report Calendar
Reference Library
Recycle Bin
Summary
This sample dashboard helps readers understand the number of items and number of problems with those items. Each item has both an account representative and an organization.
Key Performance Indicators
Key performance indicators display the current progress toward goals for the minimum number of items, and the total number of problems with items.
Reports
Excel workbooks display the distribution of both items and problems among account representatives and organziations.
Filters
The Excel reports can display information for a specific account representative by using the Account Representative filter.
Key Performance Indicators
New Actions Show Only Problems
Indicator Goal Value Status
Morale 7 9
Productivity 85 73
Expenses 50000 80000
Problems by Organization and Account Representative
Open Update Find View: A
Contoso, Inc. Fabrikam, Inc. Litware, Inc.
A. Datars 4 7 12
H. Loza 10 8 4
J. Jamjureeruk 13 3 15
K. Kalyanaraman 9 2
M. Piaseczny 14 10 1
Total Count by Organization
Open Update Find View: CC
Proseware, Inc. 21%
Contoso, Inc. 36%
Litware, Inc. 20%
Fabrikam, Inc. 23%
Minimum Counts by Organization
Open Update Find View: B
Contoso, Inc.
Fabrikam, Inc.
Litware, Inc.

Timeline



	MAY	JUN	JUL	AUG	SEP	OCT
Hardening Lab (SEC-B Accreditation)						
Lab server virtualization (recreating / provisioning all ESB vendors)						
Configure CAC / AKO SSO with SharePoint 2007						
Validate / Send out initial vendor invitations						
ESB Vendors in EBL (First Set)						
ESB Vendors in EBL (Second Set)						

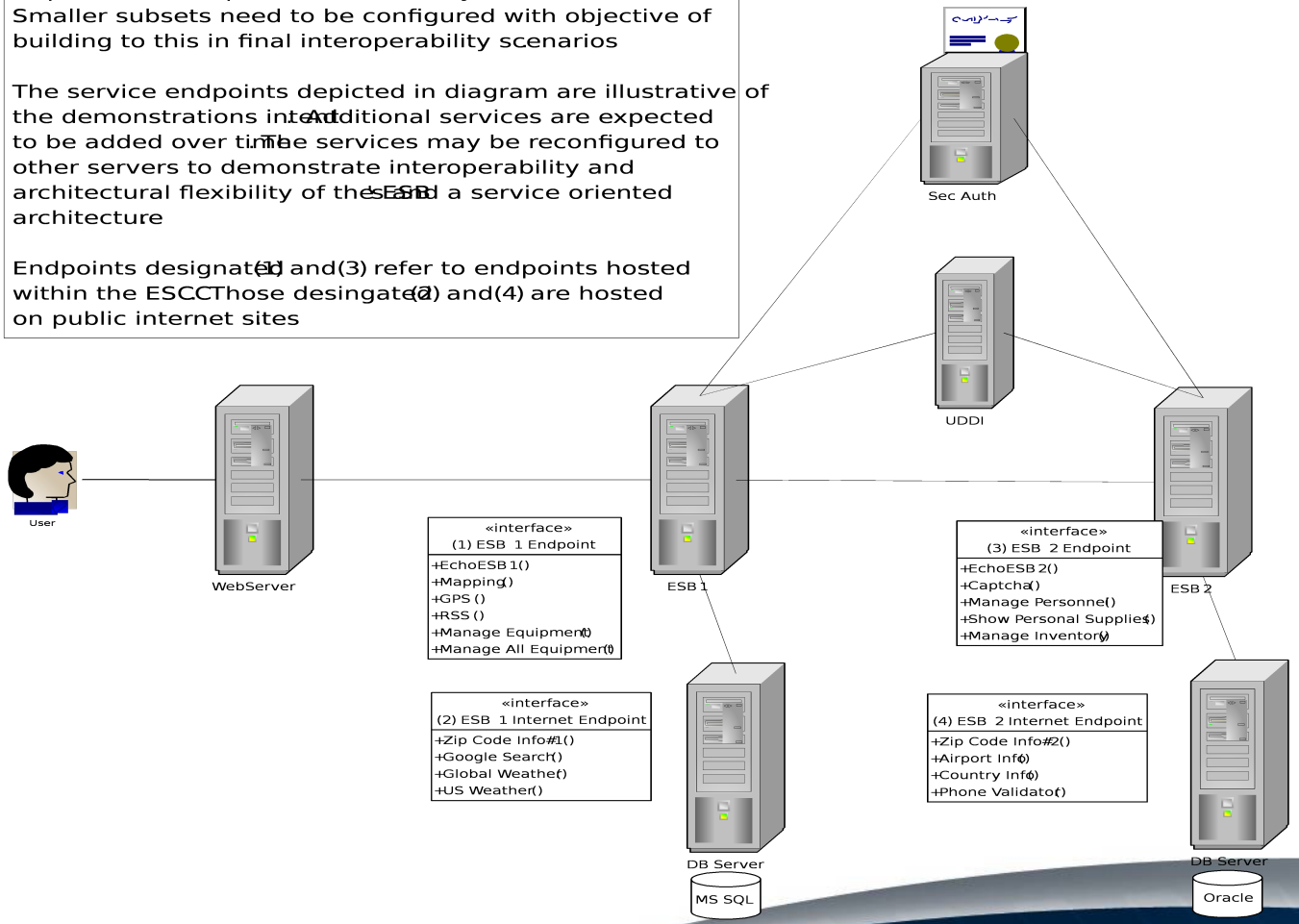
Supporting Slides

ESB Demonstration Architecture

Depiction of component connectivity (minus routers/firewalls). Smaller subsets need to be configured with objective of building to this in final interoperability scenarios

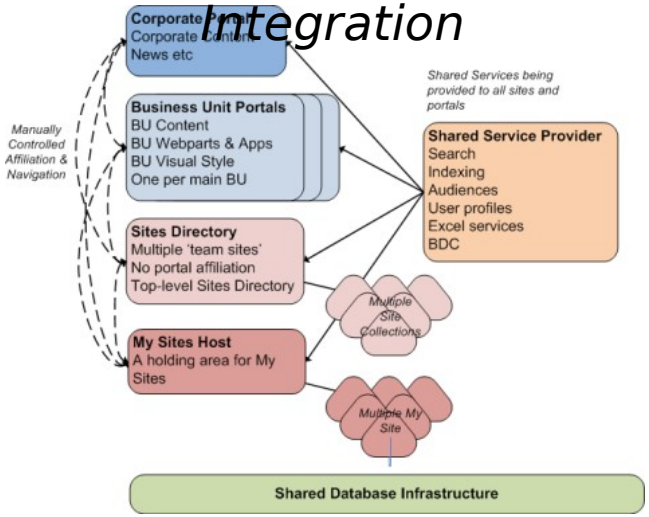
The service endpoints depicted in diagram are illustrative of the demonstrations intent. Additional services are expected to be added over time. The services may be reconfigured to other servers to demonstrate interoperability and architectural flexibility of the ESB and a service oriented architecture

Endpoints designated (1) and (3) refer to endpoints hosted within the ESCC. Those designated (2) and (4) are hosted on public internet sites



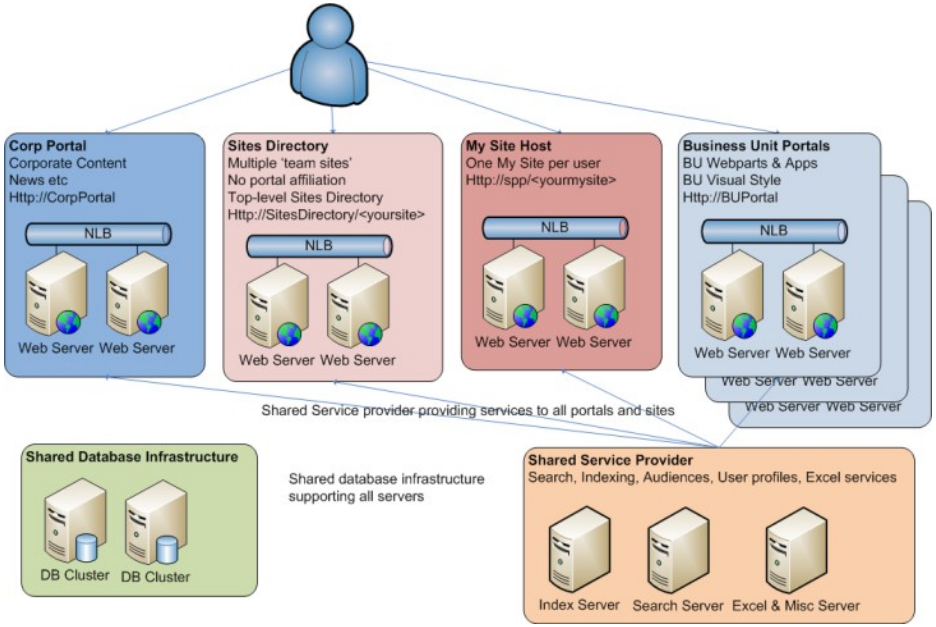
EBL Presentation Layer

SharePoint Logical Integration



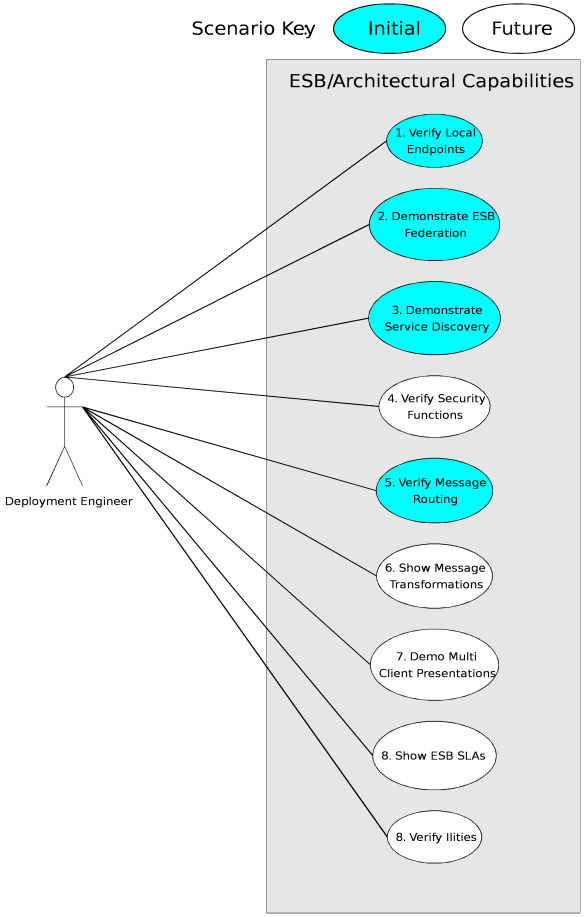
SharePoint 2007 uses a logically separated development model where the front-end portals, sites, and directories tie into a scalable set of common services. The heart of SharePoint 2007 is the backing database layer.

SharePoint Physical Integration



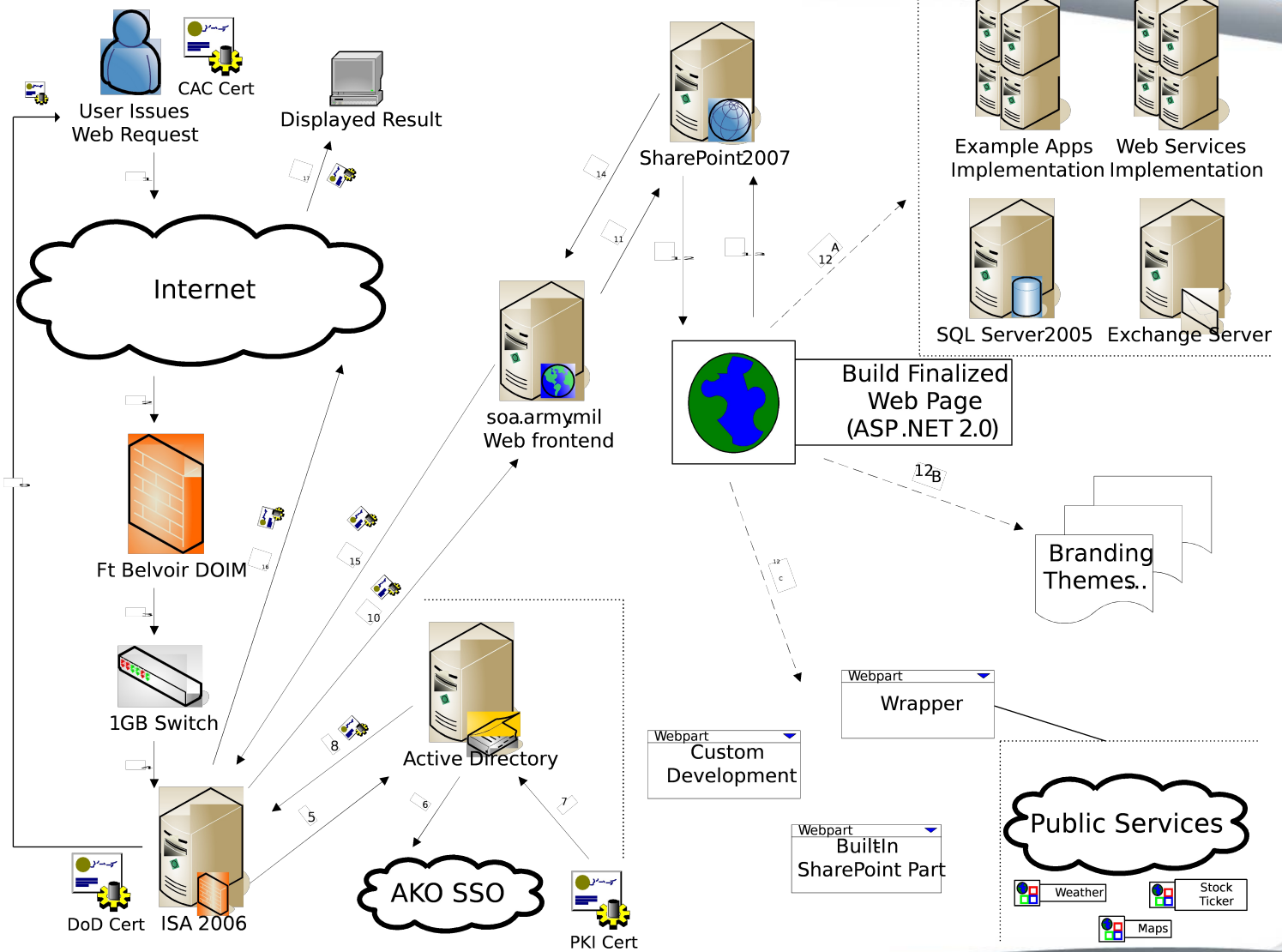
Physically, SharePoint 2007 can be scaled *in any direction*, both at the edge (portal layer) the center (shared services like Search as well as individual server components like Project Server), and third-tier (database farms).

ESB Technical Scenarios

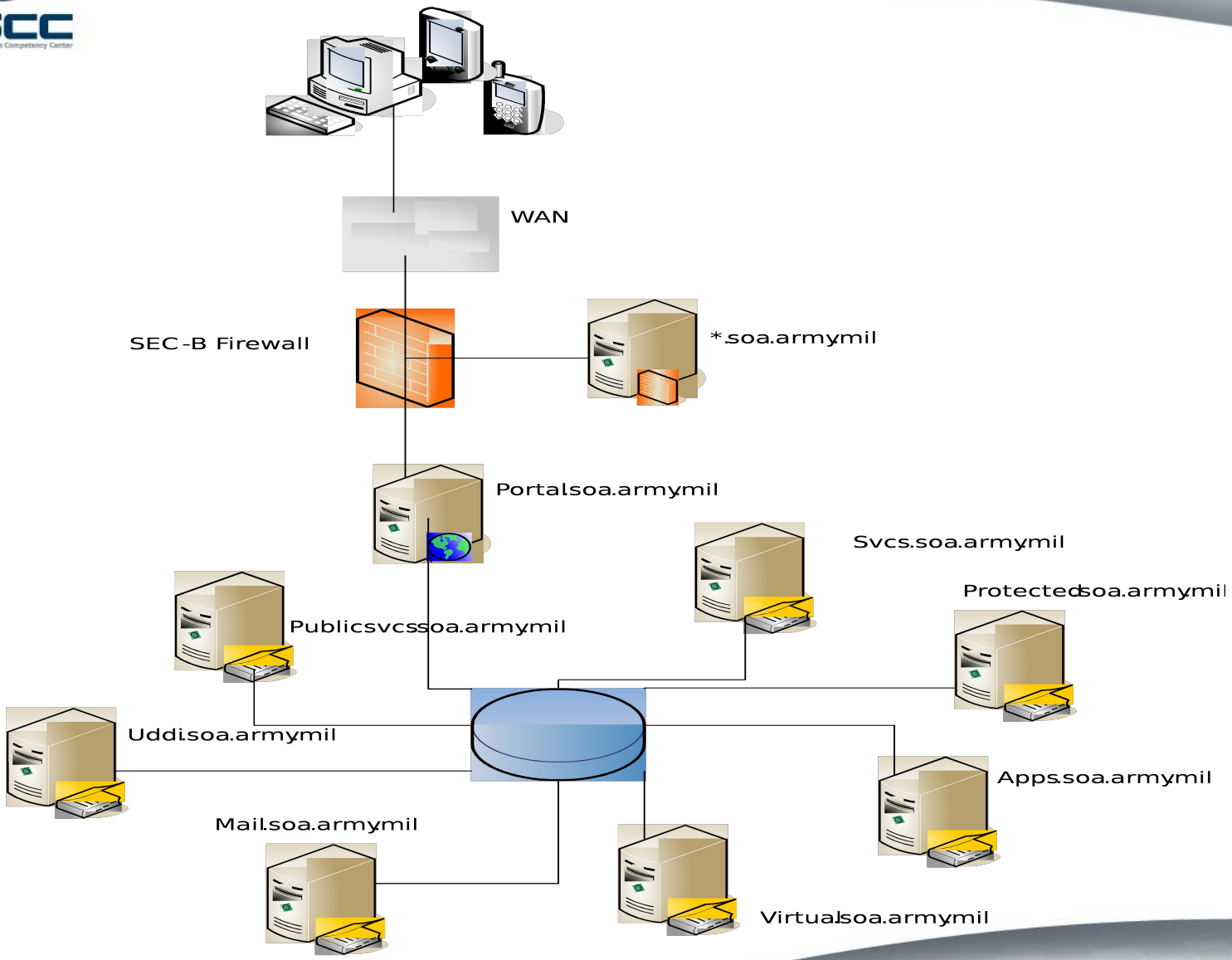


ESB Mission Scenarios

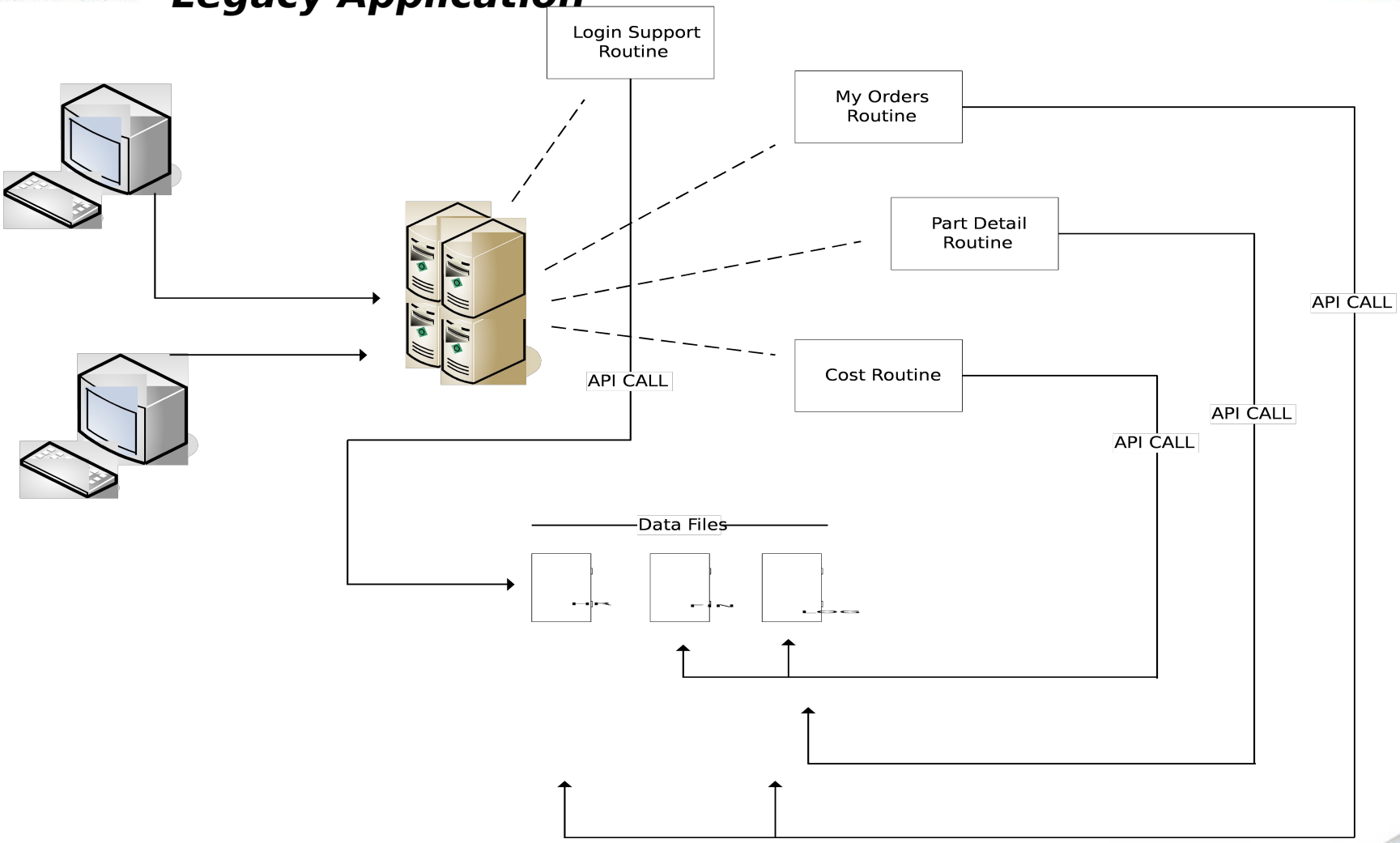
SharePoint2007Within EBL



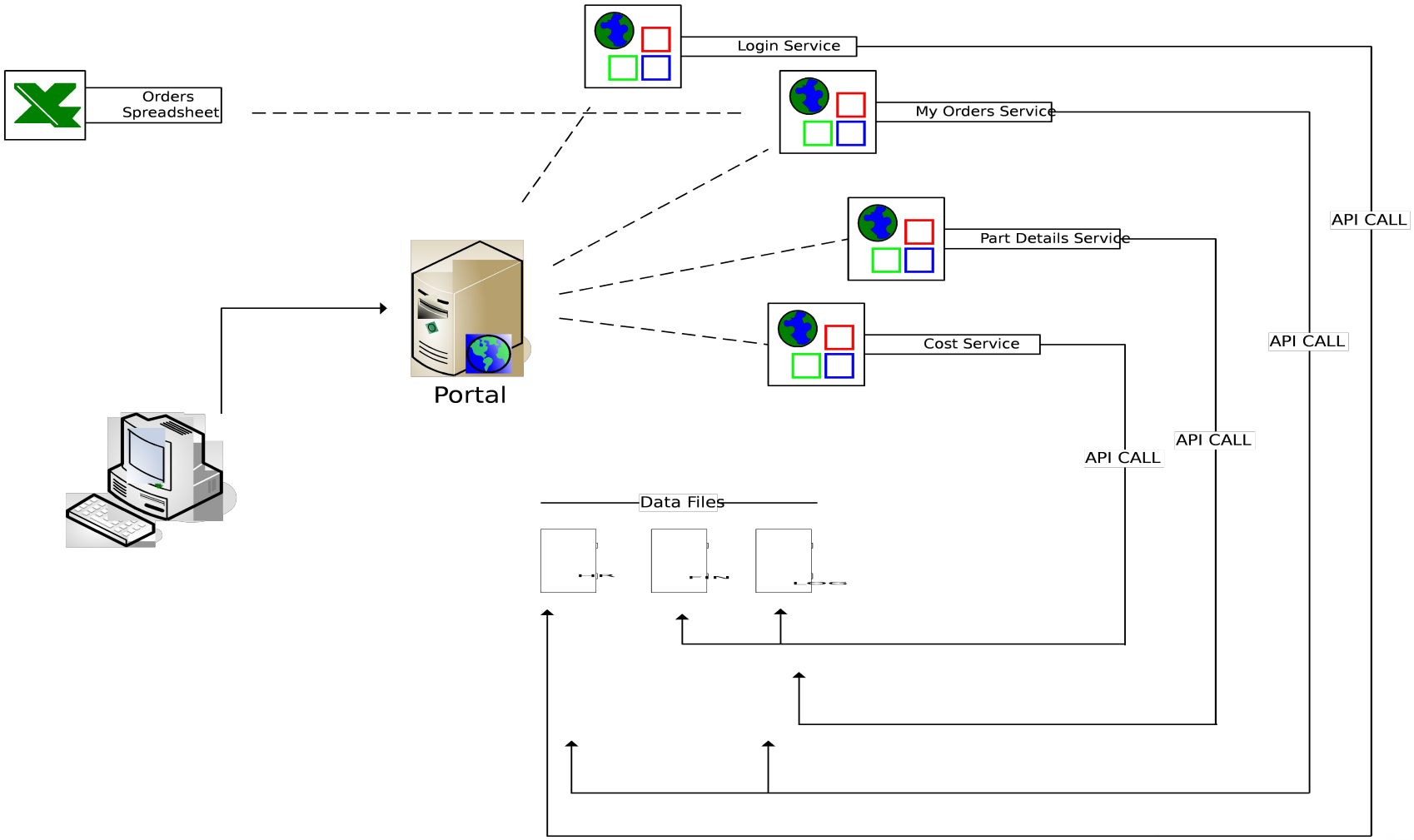
AKO SSO BREAKDOWN



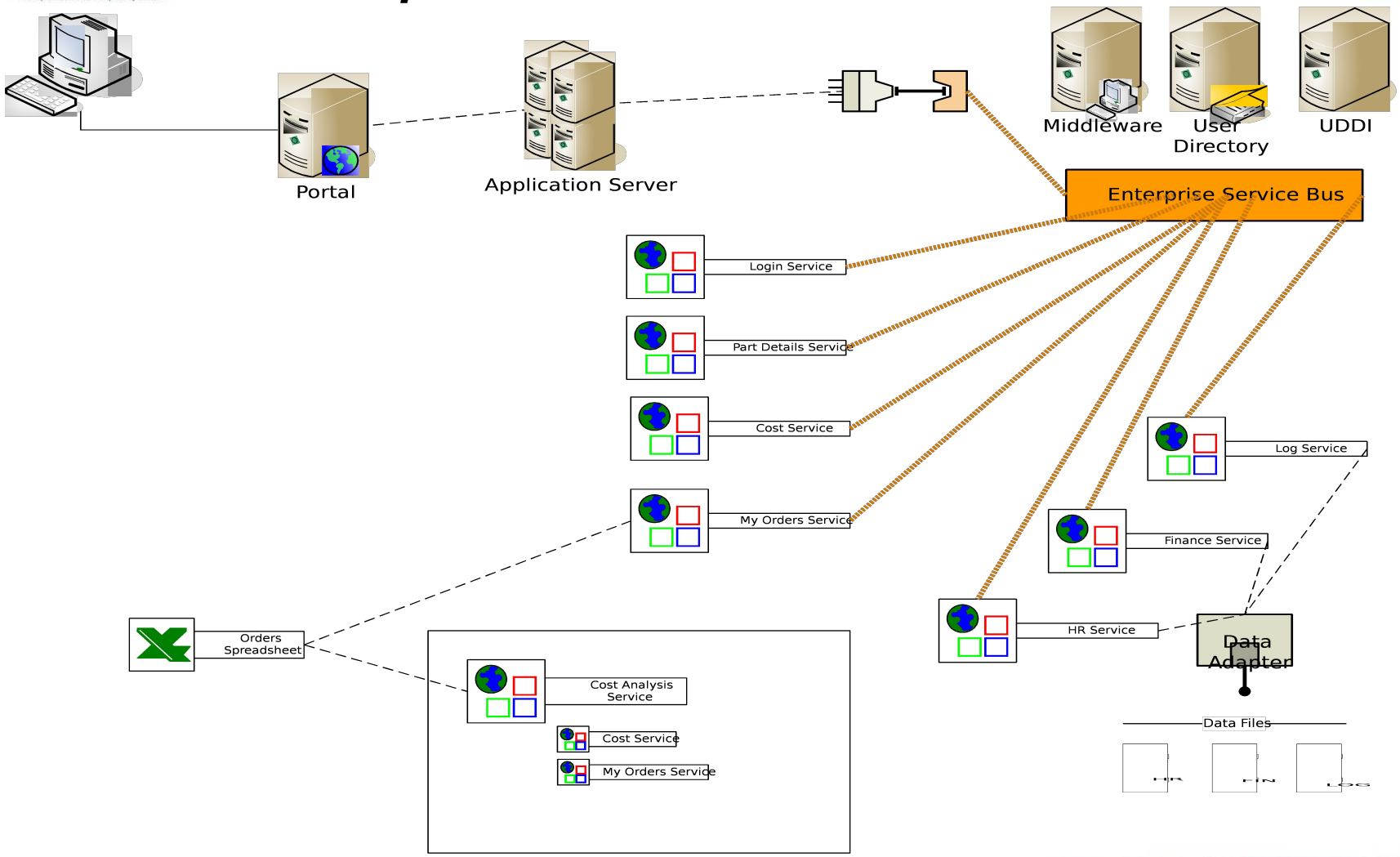
ESB Evolution Slide #1
Legacy Application



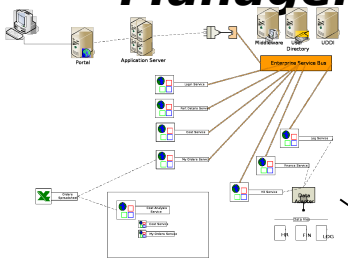
ESB Evolution Slide #2
Web Services

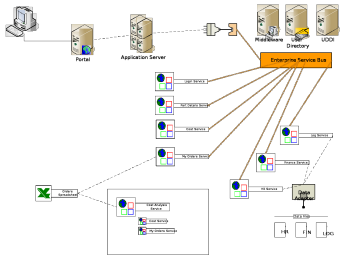


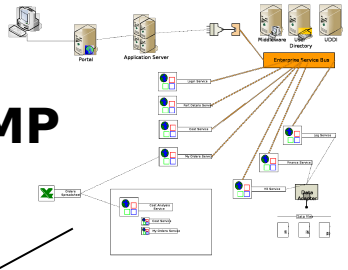
ESB Evolution Slide #3
The Enterprise Service Bus

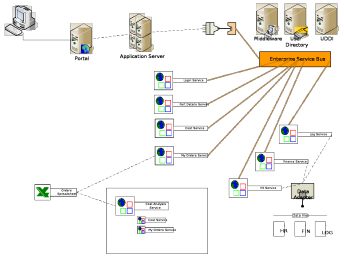


ESB Evolution Slide #4
NCES And Federated Identity Management

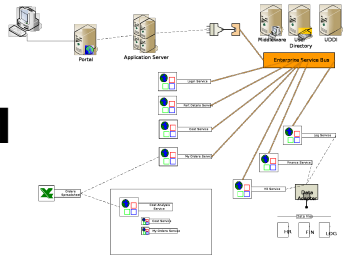

HR

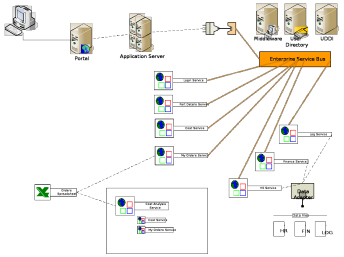

NETCOM

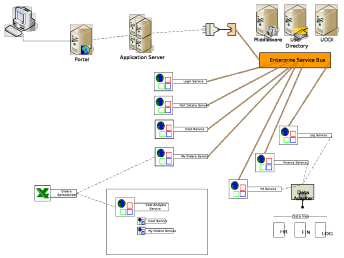

LMP

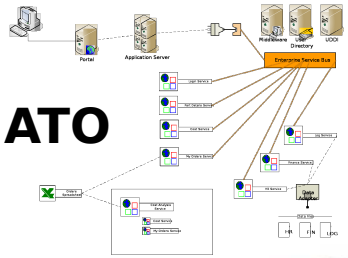

LOG

NCES = TRUST


PLM +


INDUSTRY


DOIM


NATO